

PATENT ABSTRACTS OF JAPAN

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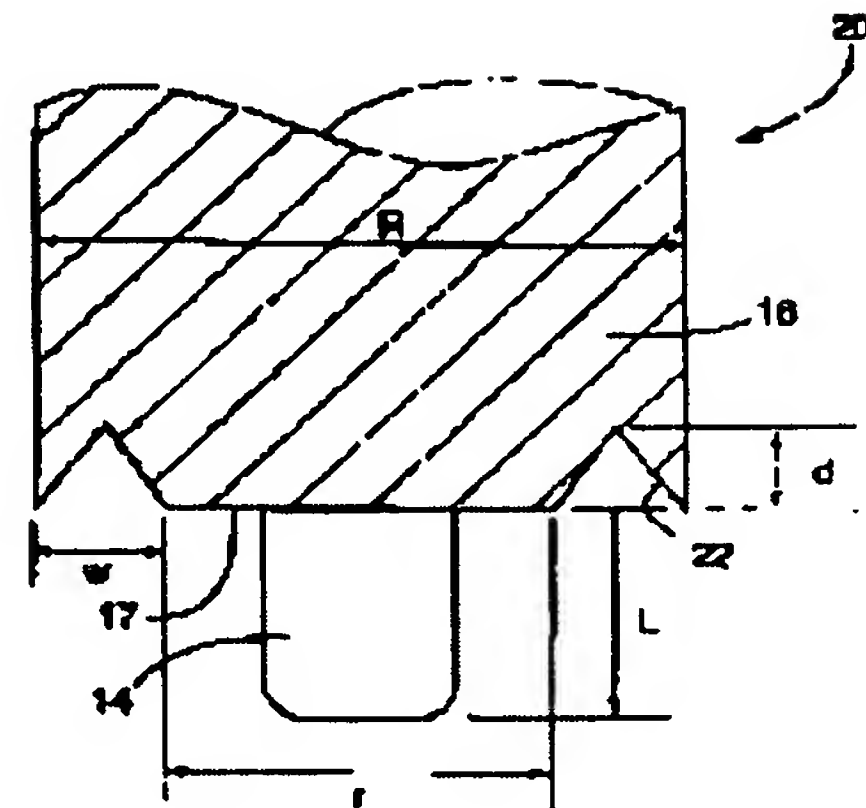
(21)Application number : 09-168311 (71)Applicant : SUMITOMO LIGHT METAL IND LTD
 (22)Date of filing : 25.06.1997 (72)Inventor : KUMAGAI MASAKI
 TANAKA SUNAO

(54) JIG FOR FRICTION STIRRING JOINING

(57)Abstract:

PROBLEM TO BE SOLVED: To hold a plastic fluid material discharged as burr at the time of joining into this peripheral groove, to give the pushing effect into the joined part and to stabilize the formation of a joint by arranging the peripheral groove around a pin at the tip part of a rotary jig (pin type rotary jig).

SOLUTION: On the tip surface 17 of the jig body 16 standing the pin 14, the peripheral groove 22 having a V-shape type cross sectional surface is arranged along the outer peripheral edge part. The inner diameter (r) of this peripheral groove 22 is made to 0.5-0.95 of the outer diameter R of the jig body 16 and the groove width W is made to 0.025-0.25 of the outer diameter R of the jig, body, and at the outside in the diameter direction from the peripheral groove 22, the remained part of the tip end surface 17 of the jig body 16 is avoided as much as possible. By this constitution, the plastic fluid material discharged as the burr to the outer part can effectively be held into the peripheral groove 22. Further, the depth (d) of the peripheral groove 22 is made to 0.01-0.33 of the length L of the pin and the discharged plastic fluid material is pushed to increase the pushing effect into a stirring joined part. Then, the peripheral groove 22 can be formed as a U shapetype or an arc type cross section in addition to the V shape type.



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